

Name: _____

Date: _____

Visual Bearings Navigation Practical

Overarching: Don't erase any DRs. If you think you should erase some portion of the DR based on what we've discussed in class, then point to the section and annotate the chart lightly in pencil with the word "erase."

The following nav aids are used throughout:

Holland Point Beacon	The beacon labeled Fl G 2.5s 18ft 5M "1"
Poplar Island Tangent	That edge of the Poplar Island that is tangent to your position
Bloody Point Bar Light	Bloody PT Bar – Fl 6s 54ft 7M HORN
Thomas Point Light	Thomas PT Shoal – Fl 5s 43ft 11M HORN

Initial conditions: You are on the return leg portion of a *Spring CSNTS Overnighter For Prospective Assistant Officers In Charge (AOICs)*. You have been operating on Chart 12266, and have been beating your way up the Bay all morning. It's about 1500 now, and you getting ready to relieve the Navigation Plotter – Just in time to do the chart shift onto Chart 12270, which will take you all the way back to Annapolis Harbor.

The off-going Navigation Plotter has the following to say while turning over:

"We're steering close-hauled on starboard tack. The helmsman has been able to steer about 355, but we're making some leeway because we're close-hauled. We've been averaging about 6 knots, and my fixes indicate there's not much current running. The Loran C is simulated as Non Operational (The OIC has taped over the display), so we're shooting visual nav aids. The OIC directed a fifteen-minute fix interval and I've been shooting Holland Point Beacon, Poplar Island Tangents, and Pier Light, which is well behind us off of Chesapeake Beach. Pier Light's not on the next chart, but you should be able to gain Bloody Point Bar Light right after you shift charts. I've set you up to transfer the 1515 DR forward, since we're now north of Holland Point, and that's where Chart 12270 starts. Oh, by the way, you might want to review the OIC's Standing Orders (attached as enclosure (1) to refresh your memory on what reports he requires personally – He's in the rack for a nap."

You understand, and announce:

"Very well, I relieve you as Navigation Plotter."

You then step topside and announce:

“Attention in the Navigation Party, this is _____, and I’m the Navigation Plotter. Hand Bearing Compass Operator, look for Bloody Point Bar Light – It should be broad on the starboard bow. Once I shift the Chart, I’ll give you an expected gain bearing.”

The Hand Bearing Compass Operator acknowledges:

“Look for Bloody Point Bar Light, Aye.”

THE PRACTICAL:

You find the following written in the deck log:

1500 Shifted to Chart 12270. Transferred the 1515 DR
Latitude: 38° 43’ 55”//Longitude: 76° 27’ 20” C-355//S-6.

1. Transfer and properly label the 1515 DR.
2. How should the Latitude and Longitude have been written?

Lat: _____ Longitude: _____

The Hand Bearing Compass Operator peeks down the companionway hatch and asks:

“Navigation Plotter. It’s nearly 1515. Report the expected gain bearing for Bloody Point Bar Light.”

You acknowledge as follows:

3. “Bloody Point Bar Light bears: ____.” (Use your 1515 DR Position)

The Hand Bearing Compass Operator announces:

“I hold Bloody Point Bar Light, Bearing ____°” (Fill in from 3 above)

You announce:

“Attention in the Navigation Party. The next round will be at 1515. Shoot Holland Point Beacon, Poplar Island Tangent, and Bloody Point Bar Light”

You break out the U.S. Navy Standard Bearing Book and update it for the 1515 round, but the guy you relieved had the first several entries are already made for you. (See enclosure (2)).

At 1515 you hear the Hand Bearing Compass Operator announce:

“Mark time 1515. Poplar Island Tangent – 062; Holland Point Beacon – 292; Bloody Point Bar Light – 038.”

4. What’s missing from this report?

5. What should you do to correct this deficiency?

6. Record the Latitude and Longitude of your 1545 DR:

Latitude: _____ Longitude: _____

At 1530 you hear the Hand Bearing Compass Operator announce:

“Mark time 1530. Poplar Island Tangent – 079; Holland Point Beacon – 260; Bloody Point Bar Light – 048. Sounding 35 feet.”

7. You plot the fix and announce:

8. What’s the problem with these three nav aids?

9. Of the three nav aids listed, which one's bearing is changing fastest and why?

10. What's the problem with the 1600 DR?

11. If you want to stay on this course much longer, what should you do about the fix interval and why?

At 1545 you hear the Hand Bearing Compass Operator announce:

“Mark time 1545. Bloody Point Bar Light – 062, Poplar Island Tangent – 097, Holland Point Beacon – 227. Sounding 30 feet.”

12. You plot the fix and announce:

The AOIC calls you topside and tells you he wants to stay on this course for a few more minutes.

13. You agree, but respond we must tack by:

He tells you to shift to a 5 minute fix interval to get as close as possible before tacking.

14. Is this shift in fix interval within his purview?

At 1550 you hear the Hand Bearing Compass Operator announce:

“Mark time 1550. Bloody Point Bar Light – 067; Poplar Island Tangent – 103; Holland Point Beacon – 220. Sounding 28 feet.”

15. You plot the fix and announce:

At 1555 you hear the Hand Bearing Compass Operator announce:

“Mark time 1555. Bloody Point Bar Light – 072; Poplar Island Tangent – 108; Holland Point Beacon – 214. Sounding 22 feet.”

16. You plot the fix and announce:

You hear: “Ready about. Helms Alee.” You look at your watch and its 1557.

You then hear:

“Navigator: Steady on course 080.”

17. You reply:

18. Now that we’re opening the beach you recommend that the fix interval be shifted back to 15 minutes. The AOIC concurs.

You announce:

19. “Attention in the Navigation Party. Shift to a fifteen minute fix interval. The next fix will be at time:

At 1610 you hear the Hand Bearing Compass Operator announce:

“Mark time 1610. Bloody Point Bar Light – 072; Poplar Island Tangent – 118; Holland Point Beacon – 224. Sounding 30 feet.”

At 1615 the Hand Bearing Compass Operator announces:

“I believe I hold Thomas Point Light, Bearing - 020.”

20. You plot this LOP and announce:

“Attention in the Navigation Party. The next round will be at 1625. Shoot Bloody Point Bar Light, Poplar Island Tangent, Holland Point Beacon and Thomas Point Light. Assuming Thomas Point cuts, we’ll gain Thomas Point and drop Holland Point Beacon. We’ll then shoot another round at 1630 to get back into shooting fifteens on the quarter hour. Carry on.”

At 1625 you hear the Hand Bearing Compass Operator announce:

“Mark time 1625. Bloody Point Bar Light – 065; Poplar Island Tangent – 133; Holland Point Beacon – 232;. Thomas Point Light – 011. Sounding 30 feet.”

21. You plot the fix and announce:

Since Thomas Point cut, you announce:

22. “Attention in the Navigation Party.

At 1630 you hear the Hand Bearing Compass Operator announce:

“Mark time 1630. Bloody Point Bar Light – 063; Poplar Island Tangent – 139;. Thomas Point Light – 005. Sounding 55 Feet.”

23. You plot the fix and announce:

24. Record the Latitude and Longitude of your 1700 DR:

Latitude: _____ Longitude: _____

25. What's wrong with this DR – in other words, what should have been done to ensure no DR plots in shoal water?

26. At 1640 you hear "Ready About. Helms Alee."

You then hear:

"Navigator. Steady on course 355."

You respond:

"Steady on course 355, Navigator Aye."

27. Record the Latitude and Longitude of your new 1700 DR:

Latitude: _____ Longitude: _____

The lookout reports that he sees a large merchant of the starboard bow. The merchant appears to be Southbound, and looks to be in the vicinity of WR87. The AOIC tells you to hail him, and report that we'll remain clear of his track.

You acknowledge: "Hail the southbound merchant, Navigator Aye."

28. What channel(s) would you select to transmit VHF?

29. What would you say after you key the mike?

Extra Credit:

Explain the nomenclature associated with the nav aids we've been using:

Holland Point Beacon The beacon labeled Fl G 2.5s 18ft 5M "1"

Bloody Point Bar Light Bloody PT Bar – Fl 6s 54ft 7M HORN

Thomas Point Light Thomas PT Shoal – Fl 5s 43ft 11M HORN

STANDING ORDER NUMBER ONE

REQUIRED REPORTS

1. I require that the Watch Captain make reports to me under any of the following conditions:
 - a. When the closest point of approach (CPA) of any surface contact will be less than one nautical mile. (Use radar or seaman's eye to make this determination).
 - b. When you are unable to get a fix in piloting waters within two established fix intervals.
 - c. If charted depth in the vicinity of a fix varies greater than ten feet from the reading of the fathometer, when in less than 50 feet of water.
 - d. If a casualty occurs onboard or there is a report of a casualty on another STC in company.
 - e. If the true wind backs or veers in excess of 30 degrees or increases in excess of ten knots in one hour
 - f. When a rise or fall in barometric pressure in excess of .04" per hour is observed or .06" in one watch.
 - g. If a marked change in visibility occurs.
 - h. If a fog signal is heard in low visibility.
 - i. When an unusual object or dangerous condition is sighted such as breakers, unlighted or derelict vessels, waterspouts, discolored water or anything else seemingly out of the ordinary.
 - j. When necessary to send someone aloft.
 - k. When NA-XX is contacted by another OINC for anything other than a routine exchange of information.
 - l. In the event of landfall.
 - m. When entering a region where soundings are less than fifty feet in depth.
 - n. **WHENEVER YOU ARE IN DOUBT.** The mere presence of doubt in your mind is grounds to call me. If a situation looks bad, smells bad or just plain feels bad, it usually is. I am always on duty. **NEVER HESITATE TO CONTACT ME!**

PLACE

GYRO ERROR

[illegible]